walls **242** of body portion **236** in engagement with worm gear portion **236** of the pivot shaft **216**. The pair of bearings **248** support the jack screw **250** for rotation when the pivot shaft **216** is rotated by the motor M.

As shown in FIG. **15**, the stop portion **238** is formed on a lower end of the body portion **236** of the inner pedal arm **218** to extend rearwardly in the direction of the driven pedal arm **220**. The stop portion **238** is formed to engage a portion of driven pedal arm **220** when the pedal is in a forward adjustment position as shown in FIG. **15**. A throttle cable **256** is mounted to the aperture **80** formed in the upper portion of the body portion **236**. The inner pedal arm **218** may be formed of rigid material, preferably molded.

As shown in FIG. **15**, the pedal arm **220** has a generally L-shape with an upper portion **258** forming a channel and a lower portion **260** supporting the pedal **20'**. A collar **262** is formed around a top of the upper portion **258** of the pedal arm **220**. The collar **262** has throughbores to receive the pivot pin **242**.

The upper portion **258** of the pedal arm has a rear wall **264** and a pair of side walls **266** extending therefrom to form the u-shaped channel. The pair of the side walls **266** are spaced apart to receive a slide block **268** therein. The slide block **268** has a threaded bore **270** for receiving the jack screw **250**. A pair of pins **272** extend from opposite sides of the slide block **268** to be received in slots **274** formed in each side wall **266**. The slots **274** extend longitudinally downwardly from the top to guide the slide block **268** during adjustment. The rear wall has an aperture **276** for fixedly receiving the threaded portion of the jack screw. The position of the pedal arm **220** may be thus adjusted by rotating the pivot shaft **216** and worm gear **226** to turn the pinion gear **254** and jack screw **250** in the slide block **268** of the pedal arm **220**. The slots **274** of the pedal arm **220** permit the slide block **288** to move with respect to the pivot rod **256** as the pedal arm **220** pivots during adjustment.

An abutment surface **278** is formed on a front portion of the pedal arm **220** beneath the slots **274**. The abutment surface **278** contacts the stop surface **238** of the inner arm **218** when the pedal is in the forward position. The stop flange **280** is formed at the end of the jack screw **250** to stop the travel of the pedal arm **220** at its full rearward adjustment position, as shown in FIG. **18**.

As shown in FIG. **16**, the motor M is mounted directly to the bracket **214**. The motor M includes a gear housing **282** containing the pinion gear **232** which is meshingly engaged with the gear **230** on the end of the pivot shaft **216**. Thus, activation of the motor as discussed above turns the pivot shaft **216** to turn the jack screw **250** and adjust the position of the pedal. When the inner arm **218** pivots around the pivot shaft **216** and the pedal **20'** is moved, depressed or released during operation of the vehicle, the pinon gear **254** of the jack screw **250** moves along the threads of the worm gear **226**. Thus, there is a very small movement of the pinon **254** of the jack screw **250** with respect to the worm gear **226** or the pivot shaft **216**. However, this movement is so small as to be negligible in rotating the jack screw so as to change the relative position of the pedal arm **220** to the inner pedal arm **218**.

The present invention may also include means for providing a memory option to "remember" and re-set the pedals **20, 20'** or pedal arms according to a pre-programmed operator preference. This memory option means may be provided by any suitable means, such as for example, a location transducer such as a potentiometer or encoder. This

memory option means may be in a computer module, which module may be integral with the motor M, but may also be separate from it. The motor M may sense the position of the pedals **20, 20'** or pedal arms and send the signal to the computer module.

It is to be understood that the motor M may be any suitable motor having any desired specifications, as required and/or necessitated by a particular end use. An exemplary motor is commercially available from DAEWOO, and preferably has a power rating of approximately 1/20 horsepower; however, the power rating may be up to between about ¼ horsepower and ⅓ horsepower.

As shown in FIGS. **1** and **15**, both the brake pedal and accelerator pedal adjusters may be driven by the same driving means (eg. one cable **60** interconnecting the worm gear **58** in accelerator pedal apparatus **10'** to the worm gear **58** in brake pedal apparatus **10, 110** to the motor M). The apparatuses **10, 10', 110,** and **210** should be set up in order to synchronize the percentage of pedal travel for each of the apparatuses **10, 10'** and **110, 210**. It is to be further understood that each of the apparatuses **10, 10'** and **110, 210** may be driven independently by separate motors and/or may be driven by separate motors but by the same control device; and/or by any combination or subcombination of the above.

The apparatuses of the present invention are further quite quiet in operation—squeaks and/or rattles are substantially prevented by standard plastic bushings for the pedal pivots; and by bronze thrust bearings for the gear drive.

While preferred embodiments of the invention have been described in detail, it will be apparent to those skilled in the art that the disclosed embodiments may be modified. Therefore, the foregoing description is to be considered exemplary rather than limiting, and the true scope of the invention is that defined in the following claims.

What is claimed is:

1. A pedal adjuster for mounting to a bracket mounted to a vehicle, the pedal adjuster comprising:

a pedal assembly including an adjuster member and a pedal arm, said adjuster member mounted to said bracket to pivot said pedal assembly about an adjuster member pivot axis, said pedal arm being mounted to said adjuster member to pivot about a pedal arm pivot axis, said pedal arm pivot axis parallel with and spaced radially outwardly from said adjuster member pivot axis and said bracket;

a drive mechanism mounted to said bracket, said drive mechanism having a rod connected at one end to said pedal arm, means for selectively moving said rod to pivot said pedal arm about said pedal arm pivot axis to adjust the position of said pedal arm with respect to said adjuster member.

2. The pedal adjuster of claim **1**, wherein said pedal arm pivot axis is positioned in an upper portion of said adjuster mechanism.

3. The pedal adjuster of claim **1**, wherein said pedal arm further comprises a pair of parallel side members, and said rod is mounted between said side members.

4. The pedal adjuster of claim **3**, wherein each of said side members have a side member having a slot for receiving a portion of said drive mechanism to guide said rod during movement of said rod.

5. The pedal adjuster of claim **1**, wherein said means for moving includes a motor.

* * * * *

1. (Original) A pedal adjuster for mounting to a bracket mounted to a vehicle, the pedal adjuster comprising:

a pedal assembly including an adjuster member and a pedal arm, said adjuster member mounted to said bracket to pivot said pedal assembly about an adjuster member pivot axis, said pedal arm being mounted to said adjuster member to pivot about a pedal arm pivot axis, said pedal arm pivot axis parallel with and spaced radially outwardly from said adjuster member pivot axis and said bracket;

a drive mechanism mounted to said bracket, said drive mechanism having a rod connected at one end to said pedal arm, means for selectively moving said rod to pivot said pedal arm about said pedal arm pivot axis to adjust the position of said pedal arm with respect to said adjuster member.

2. (Original) The pedal adjuster of claim 1, wherein said pedal arm pivot axis is positioned in an upper portion of said adjuster mechanism.

3. (Original) The pedal adjuster of claim 1, wherein said pedal arm further comprises a pair of parallel side members, and said rod is mounted between said side members.

4. (Original) The pedal adjuster of claim 3, wherein each of said side members have a side member having a slot for receiving a portion of said drive mechanism to guide said rod during movement of said rod.

5. (Original) The pedal adjuster of claim 1, wherein said means for moving includes a motor.

6. (New) A pedal adjuster for adjusting the position of a pedal in a vehicle relative to a vehicle operator comprising:

a bracket that is mounted to the vehicle;

a pedal assembly including an adjuster member and a pedal arm, wherein said adjuster member is mounted to said bracket to pivot said pedal assembly about an adjuster member pivot axis and said pedal arm is pivotally mounted to said adjuster member to pivot about a pedal arm pivot axis, such that said pedal arm pivot axis is parallel with and spaced radially outwardly from said adjuster member pivot axis and said bracket; and

a drive mechanism extending between said adjuster member and said pedal arm, wherein said drive mechanism includes a screw rod operatively attached to said pedal arm to selectively position the pedal relative to the vehicle operator.

7. (New) The pedal adjuster of claim 1 wherein said pedal arm pivot axis is positioned in an upper portion of said pedal arm.

8. (New) The pedal adjuster of claim 1 wherein said adjuster member pivot axis is positioned in a lower portion of said adjuster member, and said pedal arm pivot axis is positioned in an upper portion of said pedal arm.

9. (New) The pedal adjuster of claim 1 wherein said drive mechanism extends between an upper portion of said adjuster member and an upper portion of said pedal arm.

10. (New) A pedal adjuster for adjusting the position of a pedal in a vehicle relative to a vehicle operator comprising;

a bracket that is mounted to the vehicle;

a pedal assembly including an adjuster member and a pedal arm, wherein a lower portion of said adjuster member is mounted to said bracket to pivot said pedal assembly about an adjuster member pivot axis and an upper portion of said pedal arm is pivotally mounted to an upper portion of said adjuster member to pivot about a pedal arm pivot axis, such that said pedal arm pivot axis is parallel with and spaced radially outwardly from said adjuster member pivot axis and said bracket; and

a drive mechanism extending between said adjuster member and said pedal arm, wherein said drive mechanism includes a screw rod operatively attached to said pedal arm below said pedal arm pivot axis, to selectively position the pedal relative to the vehicle operator.